



MEMORANDUM

TO: Mayor and City Council

FROM: Robert Spillar, P.E., Director,
Austin Transportation Department

DATE: July 22, 2021

SUBJECT: **Update on Personal Delivery Devices**

The purpose of this memorandum is to provide information on the recent launch of robot delivery devices within Austin by Refraction AI, a privately held company.

Refraction AI's Rev-1 delivery devices officially began operations in the City of Austin on June 14, 2021, with a fleet of ten tele-operated devices. This deployment is a private business venture, rather than a City-run operation. This type of delivery device is authorized and governed by the State of Texas [Transportation Code Chapter 552A](#) enacted by the 86th Legislature in 2019. The Austin Transportation Department (ATD) is monitoring this new technology to ensure public safety and compliance with State law.

Robot delivery devices are defined by State law as "Personal Delivery Devices" (PDDs) that:

- (A) is manufactured primarily for transporting cargo in a pedestrian area or on the side or shoulder of a highway; and
- (B) is equipped with automated driving technology, including software and hardware, that enables the operation of the device with the remote support and supervision of a human.

In the Transportation Code, a personal delivery or mobile carrying device operated in compliance with this subchapter is not considered to be a vehicle.

PDD's are required by State code to:

- yield the right-of-way to all other traffic, including pedestrians (552A.0005);
- not unreasonably interfere with or obstruct other traffic, including pedestrians
- operate in a pedestrian area at a speed of not more than 10 miles per hour; or on the side of a roadway or the shoulder of a highway at a speed of not more than 20 miles per hour
- be equipped with a marker that clearly states the name and contact information of the owner and a unique identification number
- be equipped with a braking system that enables the device to come to a controlled stop

- be equipped with lights on the front and rear of the device that are visible and recognizable under normal atmospheric conditions on all sides of the device from 1 to 500 feet from the device, if operated at night
- maintain an insurance policy that includes general liability coverage of not less than \$100,000 for damages arising from the operation of the device

Additionally, Texas Transportation Code Sec. establishes that a local authority may regulate the safe operation of a personal delivery device on a highway or in a pedestrian area, as long as the regulation does not conflict with the enabling legislation.

Rev-1 delivery devices deliver food and other items to customers who order from one of Refraction AI's contracted restaurant or retail partners. At this time, Refraction AI is partnering with Southside Flying Pizza to deliver orders to destinations in Downtown, Travis Heights, and the South Congress area. The three-wheeled electric devices operate primarily on the shoulder of roadways and in bicycle lanes, upon roads with speed limits of 35 MPH or less. The Rev-1s are currently followed by a Refraction AI employee on an e-scooter to monitor that the device is operating safely and efficiently.

Refraction AI first contacted ATD officials on March 17, 2021 and expressed their interest in a future launch of their services in Austin. ATD met with Refraction AI in April and learned that the company had almost two years of experience operating in Ann Arbor, Michigan. ATD then met with Ann Arbor officials regarding the safety and operations of the Rev-1 delivery robots. Ann Arbor officials noted that no collisions or unsafe occurrences had been reported since Refraction AI's launch there. On May 14, 2021, the company informed ATD that they planned to launch their delivery services in Austin on June 7, 2021, consistent with State law. The official launch date was later moved to June 14, 2021.

Prior to launch, ATD also asked Refraction AI to participate in a demonstration of the Rev-1 to familiarize Austin officials with the delivery devices. A physical demonstration of the Rev-1 was conducted on June 2, 2021 at ATD's Toomey Road facility. Officials from ATD, the Parks and Recreation Department, the Austin Police Department, and the Austin Fire Department were in attendance. Prior to their launch, ATD also coordinated with Austin 3-1-1 to provide a process and response to any potential public inquiries.

Should you need additional information, please contact ATD Mobility Services Division Manager, Jacob Culberson, Jacob.Culberson@austintexas.gov, (512) 974-1489.

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